

**A Review of the Genus *Walshomyia* Including A New  
Species Reared from *Cupressus* Galls in California**  
(Diptera : Cecidomyiidae)

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The western North American genus *Walshomyia* Felt (Cecidomyiinae: Oligotrophidi) may be distinguished from all other North American Oligotrophidi by the following combination of characters: palpus short, one or two segmented;  $R_5$  curved distally to join C behind wing apex; claws short, each about one-half as long as empodium; ovipositor short, barely protrusible, the upper lamella entire or bifurcate.

The species comprising *Walshomyia* are gallmakers on species of *Juniperus* and *Cupressus*. The genus differs from *Oligotrophus* Kieffer only in the number of palpal segments. In more important characters, such as the genitalia, *Oligotrophus betheli* Felt and *Oligotrophus pattersoni* White, both reared from *Juniperus*, actually show a greater resemblance to species of *Walshomyia* than to the other Nearctic species of *Oligotrophus*. Nevertheless, *Walshomyia* does key down well as a group, and its possible synonymy with *Oligotrophus* should await a generic revision of the super-tribe Oligotrophidi.

Felt assigned three species to *Walshomyia*: *W. juniperina* Felt (the type species), *W. texana* Felt, and *W. insignis* Felt. I am here transferring *Rhopalomyia sabinae* Patterson to *Walshomyia* and describing one new species, *Walshomyia cupressi*, to bring the total number of species in the genus to five. A yet undescribed species belongs here; it was reared from *Libocedrus decurrens* Torr. in Yosemite Park, California and referred to by Felt (1940: 46) as *Rhopalomyia* sp. Felt's specimens of this species consist only of several pupae and several very teneral adults that I pulled out of the pupal skins. Although it is obvious that they are a new species of *Walshomyia*, they are not in good enough condition to warrant a description and are left undescribed for the present.

I can find no morphological differences to separate *W. juniperina* from *W. sabinae* and would consider them synonyms except that *W. juniperina* was reared from fruit of *Juniperus* (Felt, 1908) and *W. sabinae* from apical bud galls (Felt, 1921) of *Juniperus*. Although Felt stated that the palpi of *W. juniperina* were one segmented (Felt, 1915) and those of *W. sabinae* two segmented (Felt, 1921), both one and two segmented palpi are present in both type series.

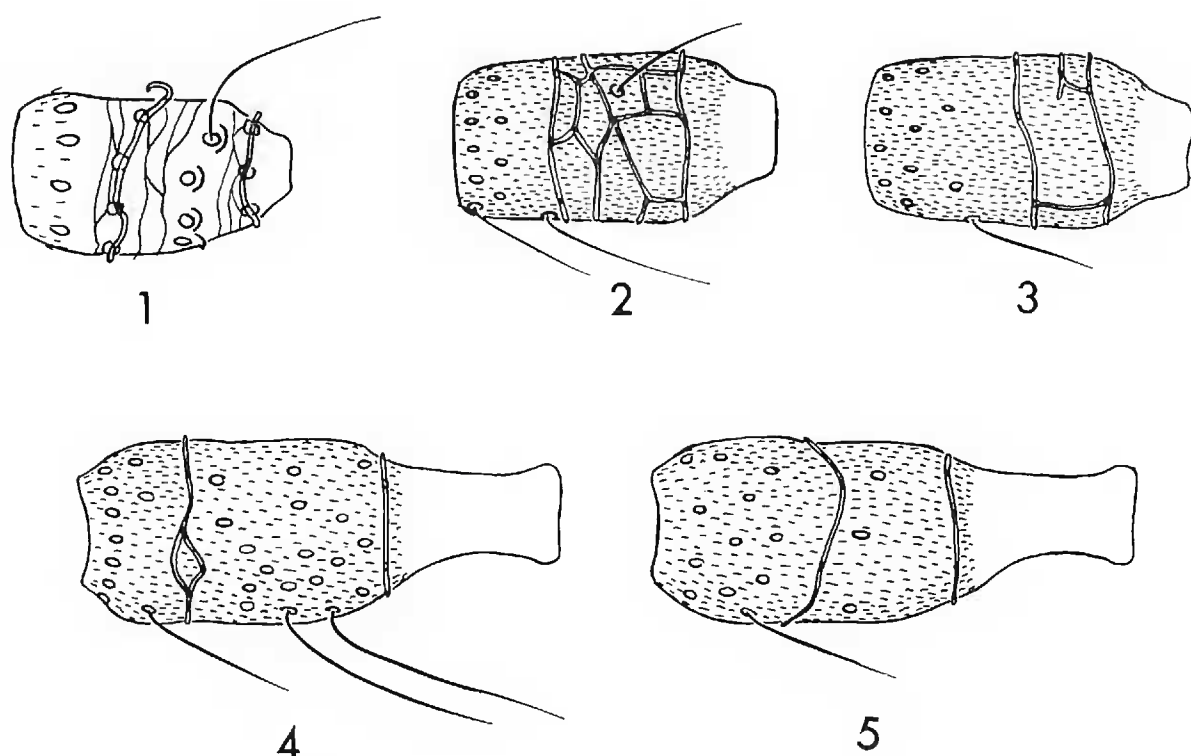
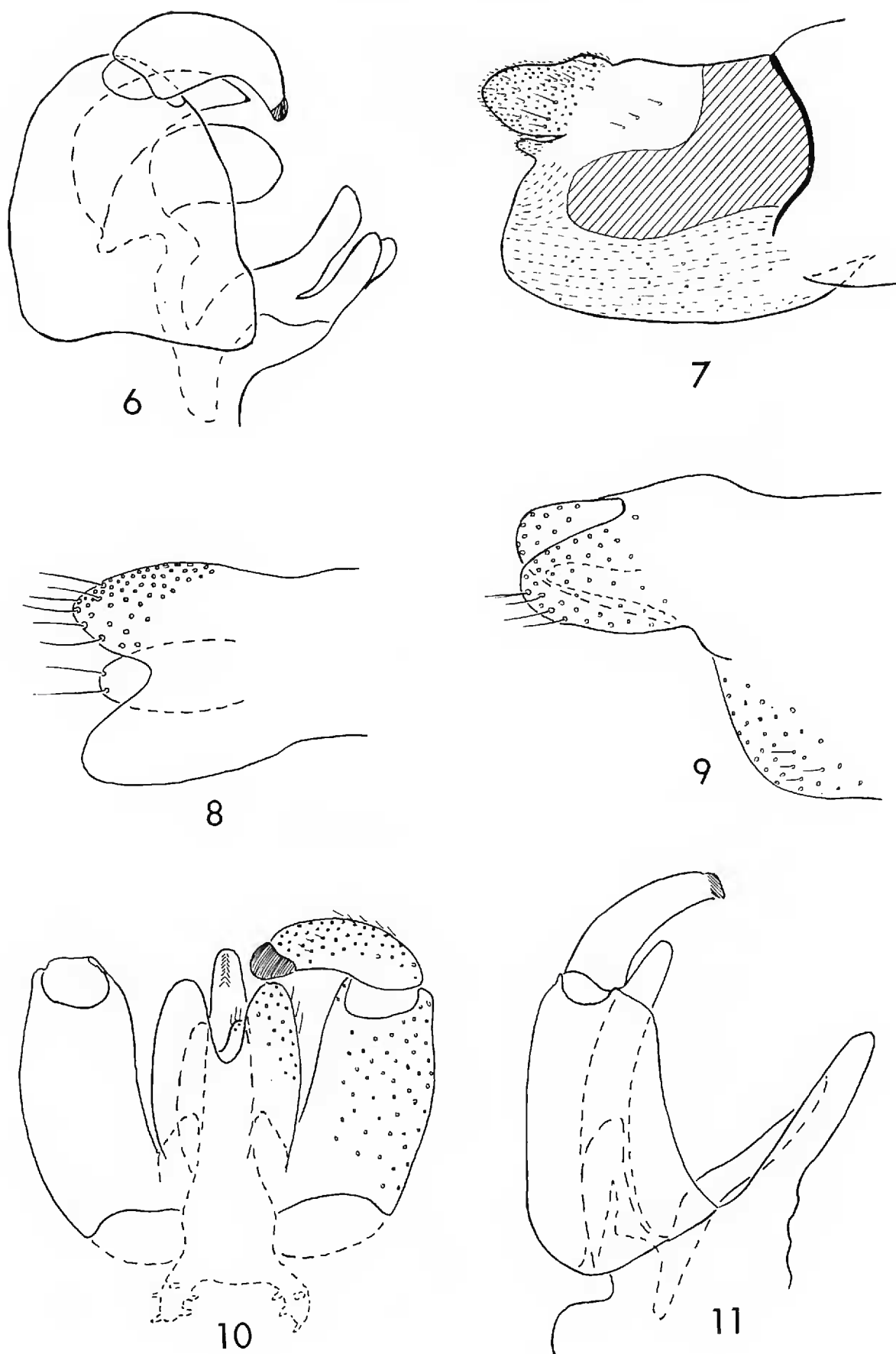


FIG. 1. Female antennal flagellomere VIII of *W. insignis*. FIGS. 2-5. Antennal flagellomere V of *W. cupressi*: FIGS. 2-3, female, ventral and dorsal view, respectively; FIGS. 4-5, male, ventral and dorsal view, respectively.

#### KEY TO ADULTS OF SPECIES OF WALSHOMYIA

1. Ovipositor (fig. 7) partially sclerotized, dorsal lamella entire or bifurcate, ventral lamella small, less than half as long as dorsal; male sternum X entire ..... 2
- Ovipositor (fig. 9) completely soft, dorsal lamella bifurcate, ventral lamella large, almost as long as dorsal; male sternum X bifurcate; reared from apical bud galls on *Cupressus* spp. .... *W. cupressi*, new species
2. Female antennal flagellomeres (fig. 1) with interconnected striations (a second, smaller set of circumfila?) crisscrossing each flagellomere; setulae on flagellomeres present only laterad and proximad of basal row of setae; dorsal lamella of ovipositor entire, similar to that of *W. juniperina*; reared from oval, apical bud gall on *Juniperus scopulorum* Sarg. (only female known) ..... *W. insignis* Felt
- Female flagellomeres without striations and covered with setulae; dorsal lamella of ovipositor entire or bifurcate ..... 3
3. Dorsal lamella of ovipositor bifurcate; aedeagus and claspettes nearly straight, posteriorly directed (as in fig. 11); reared from apical bud galls on *Juniperus ashei* Buckholz (= *Sabina sabinoides* L.) ..... *W. texana* Felt
- Dorsal lamella of ovipositor entire (fig. 7); aedeagus and claspettes recurved dorsally (fig. 6) ..... 4
4. Reared from fruit of *Juniperus utahensis* Engelm. .... *W. juniperina* Felt
- Reared from conical apical bud galls of *J. ashei* and *J. monosperma* (Engelm.) Sarg. .... *W. sabiniae* (Patterson) n. comb.



FIGS. 6-7. Lateral view of male genitalia and female ovipositor, respectively, of *W. juniperina*. FIG. 8. Dorsal view of lamellae of ovipositor of *W. cupressi*. FIG. 9. Lateral view of same. FIG. 10. Dorsal view of male genitalia of *W. cupressi*. FIG. 11. Lateral view of same.

**Walshomyia cupressi** Gagné, new species

ADULT.—*Head*.—Male antenna with 17 flagellomeres, each closely girdled by 2 circumfila (figs. 4–5); female antenna with 17–18 flagellomeres, each with circumfila forming a reticulate pattern ventrally (figs. 2–3); eyes many facets long at vertex but separated by about diameter of one eye facet; palpus with one short, cylindrical segment; labella small, only slightly longer than palpus, rounded apically, covered with setae as long as labella. Chaetotaxy: dorsocentral setae, 95–125; parascutal: anterior, 23–34, posterior, 12–19; mesanepimeral, 24–36; dark scales covering legs, wing membrane, halter, and pregenital segments of abdomen; scales absent from thoracic sclerites. Wing length, 3.75–4.40 mm. Proportions of segments of foreleg: femur, 1.00; tibia, 1.10–1.14; tarsomere I, 0.09; II, 0.64–0.70; III, 0.29–0.33; IV, 0.21–0.23; V, 0.08–0.09. Male genitalia (figs.) 10–11; tergum X bilobed, the lobes rounded, setose; sternum X bifurcate; basimere long, cylindrical; distimere long, flattened-cylindrical, covered dorsally with many short setae; aedeagus long, straight, tapering gradually to rounded apex, many small, posteromedially pointing setulae present apicodorsally; claspettes very short, setose. Female postabdomen: tergum VIII quadrate, covered with setae and scales; ovipositor short, unsclerotized, about 0.2 length of entire abdomen, barely protrusible; dorsal lamella (figs. 8–9) bifurcate, setose; ventral lamella almost as long as dorsal, setose ventrally.

LARVA.—Spatula absent. Papillae: two groups of three laterals each on either side of median line of thorax; six haired dorsals; two haired hind ventrals; four unhaired fore ventrals on abdominal segments; and four terminals with hairs no longer than diameter of papillar bases.

MATERIAL EXAMINED.—*Holotype male*, ex *Cupressus pygmaea*, FT. BRAGG, MENDOCINO COUNTY, CALIFORNIA, 21 April 1967, G. W. Frankie, U.S.N.M. Type No. 69984. Paratypes: 4 ♂♂, 4 ♀♀, 1 larva, same data as holotype; 6 ♀♀, ex *Cupressus sargentii*, 3 mi. SE Occidental, Sonoma Co., Calif., collected 1 March 1968, G. W. Frankie, emerged 10 to 18 March 1968.

Mr. Gordon W. Frankie, University of California, Berkeley, collected and reared the specimens described and kindly submitted them to me for description. This species causes a gall on buds of *Cupressus pygmaea* (Lemmon) Sarg. and *C. sargentii* Jeps. The gall is a greatly swollen bud. Mr. Frankie is presently studying the biology of this species.

## LITERATURE CITED

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